## THE DIRECTOR OF CENTRAL INTELLIGENCE

WASHINGTON, D.C. 20505

National Intelligence Council

DDI #3624-82 4 May 1982

MEMORANDUM FOR: Marc E. Leland

Assistant Secretary for International

Department of the Treasury

FROM:

Maurice C. Ernst

National Intelligence Officer for Economics

SUBJECT:

Hungarian GDP, Etc.

- 1. Harry Rowen told me of your concern about using for World Bank purposes the estimate of Hungary's National Income used by the IMF as one of the factors in calculating Hungary's IMF quota. This estimate is apparently obtained by converting Hungary's official estimate of National Income in forints into U.S. dollars at the official exchange rate for commercial transactions. The Hungarians claim that a single exchange rate applies to internationally traded goods. The IMF apparently accepts this method on the grounds that the commercial rate is the best available link between foreign and domestic financial flows.
- 2. The IMF's National Income estimate is used as an aggregate indicator of economic size and is only one of 8 factors used in calculating Hungary's IMF quota. The other indicators all concern Hungary's international transactions; they rank Hungary higher relative to other countries than does National Income. For World Bank purposes, however, the IMF's National Income calculations leave much to be desired. What matters regarding eligibility for soft loans is per capita National Income or GDP/GNP, and the IMF figures clearly understate Hungary's per capita income relative to other countries.
- Two alternative methods are available for comparing per capita National Income or Product for Hungary with those for other reasonably similar countries:
  - The World Bank converts GNP estimates in domestic currencies for non-Communist countries using official exchange rates and for Soviet Bloc countries using exchange rates for non-commercial transactions (e.g., for tourists).

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(2) Irving Kravis <u>et al.</u> calculates purchasing power parities for a few countries—International Comparisons of Real GDP (ICP).

The attached table presents inter-country comparisons with the IMF, World Bank, and ICA methodologies for various countries of Eastern and Southern Europe, including Hungary. The differences are striking.

The IMF method places Hungary about on the level of Romania and Turkey, well below Yugoslavia, and less than one half of Greece. These comparisons make little sense. Compared with Hungary, Turkey is clearly an underdeveloped country. Per capita incomes in Croatia, Slovenia and Northern Serbia may be comparable to the Hungarian average, but certainly are not higher. The rest of Yugoslavia must be far lower. It is also hard to believe that Portugal is above (certainly not 50% above) Hungary in percapita real income.

The World Bank method yields much more reasonable results--Hungary is about on a par with Greece, and far ahead of Yugoslavia and Portugal.

These results are supported by the ICP comparison of Hungary with Yugoslavia--the only countries in this group covered by the ICP.

- 4. Differences between international comparisons based on exchange rates used in ordinary commercial transactions and those based on purchasing power parities can be due not only to the fact that exchange rates may not be in equilibrium, but also to differences in price and cost structure. The ICP and others have clearly shown that exchange rates tend to yield lower per capita incomes (in terms of dollars or SDR's) than do purchasing power rates for relatively less developed countries. Moreover, the less developed the country, the greater the difference tends to be. The underlying cause of these results is the differences in price and cost structure as between goods and services that are, and those that are not, traded internationally.
- 5. Specific characteristics of Communist economies tend to widen the differences in results. Hungary, like other Communist economies, heavily subsidizes basic foods, rents, and many services. These activities bulk large in GNP and in "tourist baskets" appropriate to non-commercial exchange rates, but do not enter foreign trade.
- 6. I conclude that you can make a legitimate argument to the effect that the IMF figures substantially understate Hungarian per capita GDP. You should be aware, however, that there are great ambiguities surrounding all these numbers. For example, the purchasing power parity calculations for industrial countries still show the US 20 or 30 percent ahead of West Germany, while those converted at official exchange rates show West Germany well ahead, how much so depending on which day's exchange rate you use. Moreover, you can get very different purchasing power results depending on

whose weights are used and on whether countries are compared through a chain of bilateral comparisons or with some fixed, representative set of weights.

Maurice C. Ernst

Attachment, As stated

## International Comparisons of Per-Capita Income Levels

## Hungary = 100

	Per Capita National Income	Per Capita GNP	Per Capita GDP	
	(IMF) (1) 1976	(World Bank) (2) 1978	(ICP 1975	
Greece	222	99		
Portuga1	146	56		
Yugoslavia	a 127	60	73	66
Hungary	100	100	100	100
Romania	96	47		
Turkey	. 90	35		

<sup>(1)</sup> IMF: Hungary-Calculation of Quotas, Feb. 24, 1982 (C)

<sup>(2)</sup> World Bank, 1981 World Book Atlas.

<sup>(3)</sup> Irving Kravis, Alan Heston, Robert Summers, Phase III, World Product and Income: International Comparisons of Real GDP.

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